



**PATIENT**

Dexter Mills

**SPECIES**

Canine

**BREED**

Cocker/Bichon X

**SEX**

Neutered Male

**AGE**

13 years

**WEIGHT**

17.8 Lbs.

**INTERPRETED BY**

Andrea Nicastro, DVM,  
Diplomate ACVIM  
(Small Animal Internal  
Medicine)

**IMAGING  
PERFORMED BY**

Crystal Hill

**HOSPITAL NAME**

Eldale Veterinary Clinic

**REFERRING VET**

Dr. Shouldice

**INVOICE**

10013

**DATE**

12/23/2021

**PRESENTING CLINICAL SIGNS**

History: Lethargic - Profuse watery diarrhea - 2lbs weight loss since august

Abnormal PE/Chem/CBC/UA Results: biochem - TP decr. 42 (55-75), Alb decr. 21 (27-39), Glob decr. 21 (24-40), Chol decr. 3.1 (3.4-8.9) - all likely d/t GI loss - ALP incr. 368 (5-160) [was 742 in Aug], platelets incr. 648 (143-448) [605 in Aug] - r/o Cushings? stress? CBC normal other than incr. platelets (and very slight monocytosis) Spec cPL mildly incr. 307 (0-200) [was 794 in Aug] A - results consistent with GI loss, no explanation for GI signs though

**ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**

**Urinary System**

The urinary bladder, trigone, and pelvic urethra are normal in thickness and the mucosal surface is smooth. The bladder lumen is moderately distended with anechoic urine. No masses, inflammatory changes or calculi are observed. Ureteral papillae and visualized portion of the proximal urethra, visible to a depth of 2 cm, are normal.

The prostate is normal in size (0.96 cm in width) and shape. Parenchyma is homogenous. The prostatic urethra appears normal without evidence of dilation or obstruction.

The left kidney is normal in size (5.13 cm in length); with a normal shape and smooth peripheral contours. The cortex is diffusely thickened, with pinpoint hyperechoic foci. There is mild to moderate loss of corticomedullary distinction. Hyperechoic shadowing diverticular foci are visualized. There is no evidence of pyelectasia, infarcts or hydroureter. Renal vasculature is normal.

The right kidney presented normal size (4.85 cm in length); with a normal shape and smooth peripheral contours. The cortex is diffusely thickened, with pinpoint hyperechoic foci. There is mild to moderate loss of corticomedullary distinction. Hyperechoic shadowing diverticular foci are visualized. There is no evidence of pyelectasia, infarcts or hydroureter. Renal vasculature is normal.

**Adrenal Glands**

The left adrenal gland is severely enlarged and irregular, with a mass effect (2.23 cm at cranial pole) (2.05 cm at caudal pole) (4.20 cm in length). The parenchyma is diffusely heterogenous, with loss of glandular detail. There is no obvious evidence of invasion into the caudal vena cava.

The right adrenal gland is mildly enlarged in size (0.90 cm at cranial pole) (0.87 cm at caudal pole) (1.85 cm in length); normal shape; homogenous parenchyma. The glandular echogenicity and detail are unremarkable. Capsule, cortex, and medullary definition are normal. The phrenicoabdominal vein and surrounding vasculature are normal.

**Spleen**

The spleen is normal in size (0.59 cm in width at the level of the hilus) with a normal capsular contour. There is appropriate echogenicity and echotexture. No focal lesions are observed. Splenic vasculature is normal.

**Liver**

The liver is subjectively prominent in size with swollen curvilinear peripheral contours. The parenchyma is isoechoic relative to the spleen and exhibits mild heterogeneity. No distinct focal lesions are observed. Hepatic vasculature and biliary tracts are of normal volume with no evidence of congestion.



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The gall bladder is distended. The wall is normal in thickness. A moderate to large amount of aggregated echogenic partially dependent to suspended sludge, and a partially stellate pattern is observed within the lumen. The cystic and common bile ducts are normal/not seen.

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**Gastrointestinal**

The stomach and intestine are free of stasis and exhibit normal peristaltic activity. The gastric lumen is not distended. The gastric wall and pylorus are normal in thickness with a normal layering pattern. The small intestinal lumen is not dilated. The small intestinal wall thickness is normal to mildly thickened, up to 0.43 cm, with a normal layering pattern and appropriate mural detail. Discreet masses are not identified. The colonic wall is normal. No obstructive or overt infiltrative disease is noted.

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**Pancreas**

The right limb of the pancreas is visible with normal curvilinear peripheral contours. The parenchyma is largely isoechoic relative to surrounding omental fat and slightly mottled in appearance. The pancreatic duct is visible but not overtly dilated. There is no evidence of peripancreatic inflammation or effusion.

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**Free Abdomen**

The peritoneal cavity is normal. There is no evidence of inflammation or effusion. The abdominal lymph nodes are normal/not visible.

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**ULTRASONOGRAPHIC FINDINGS**

**Primary Findings**

- Left adrenal mass. Neoplasia (i.e., adenoma, adenocarcinoma, pheochromocytoma), is considered likely, with a lower possibility of benign nodular hyperplasia. Mild right adrenomegaly.
- The small intestinal wall changes are most consistent with an inflammatory process but may be a normal variant for this patient.
- The gall bladder changes could be consistent with developing mucocele or cholestasis.

\*An obvious cause for the patient's clinical signs and lab abnormalities is not identified in this study. Based on the clinical history, a protein-losing enteropathy (i.e., inflammatory bowel disease, lymphangiectasia, infectious/parasitic disease, infiltrative neoplasia), is considered likely.

**Secondary Findings**

- The diffuse hepatic changes are non-specific and could be consistent with vacuolar hepatopathy, regenerative nodular hyperplasia, and/or age-related remodeling. Inflammatory and infiltrative disease are considered less likely.
- The bilateral renal changes are most consistent with chronic interstitial nephrosis/nephritis, with dystrophic mineralization.
- The pancreatic changes are consistent with age-related remodeling/fibrosis.

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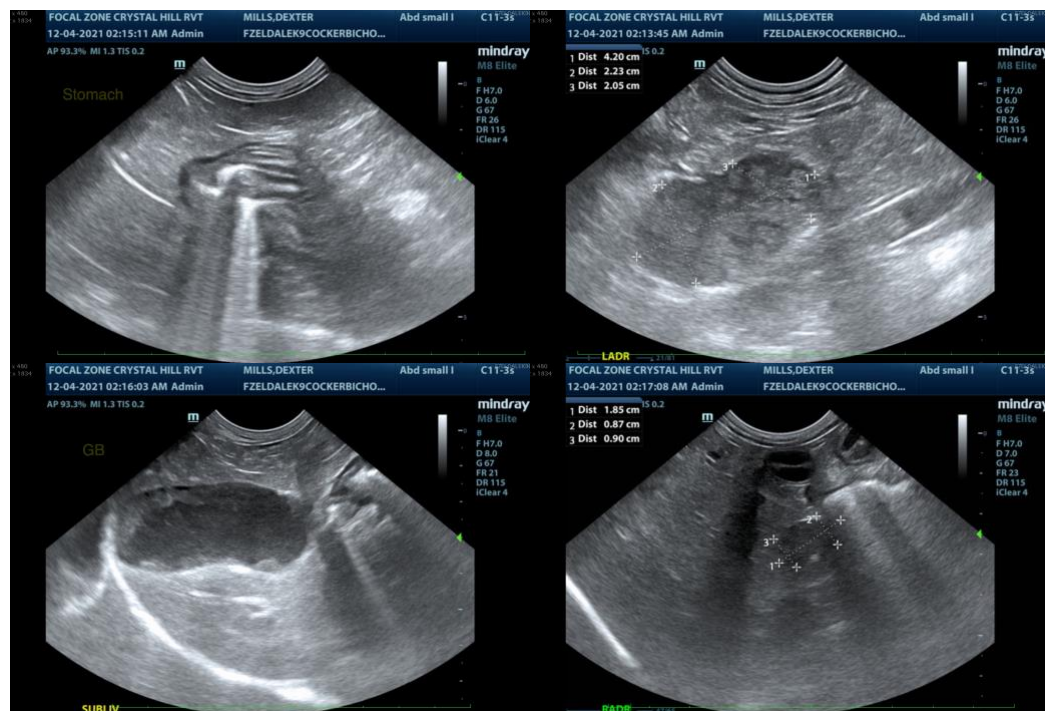
**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

- Three-view thoracic radiographs are recommended to assess for pulmonary metastases (given the left adrenal mass).

If further evaluation of the left adrenal mass is desired, consider further testing (i.e., lotus dexamethasone suppression test and urine/blood catecholamine levels), to evaluate for a functional tumor.

To further evaluate for protein-losing enteropathy, consider the following:

1. Fecal evaluation for ova and Giardia
2. Prophylactic deworming with Fenbendazole at 50 mg/kg once a day for 5 days is recommended. Repeat above protocol in 3 weeks.
3. Six-week limited antigen diet trial for endoscopic or surgical gastrointestinal biopsies.
4. Three-view thoracic radiographs should be performed prior to any anesthetic event. To further evaluate for concurrent causes of Hypoalbuminemia, consider a UPC and Pre- and Post-prandial Serum Bile Acids.





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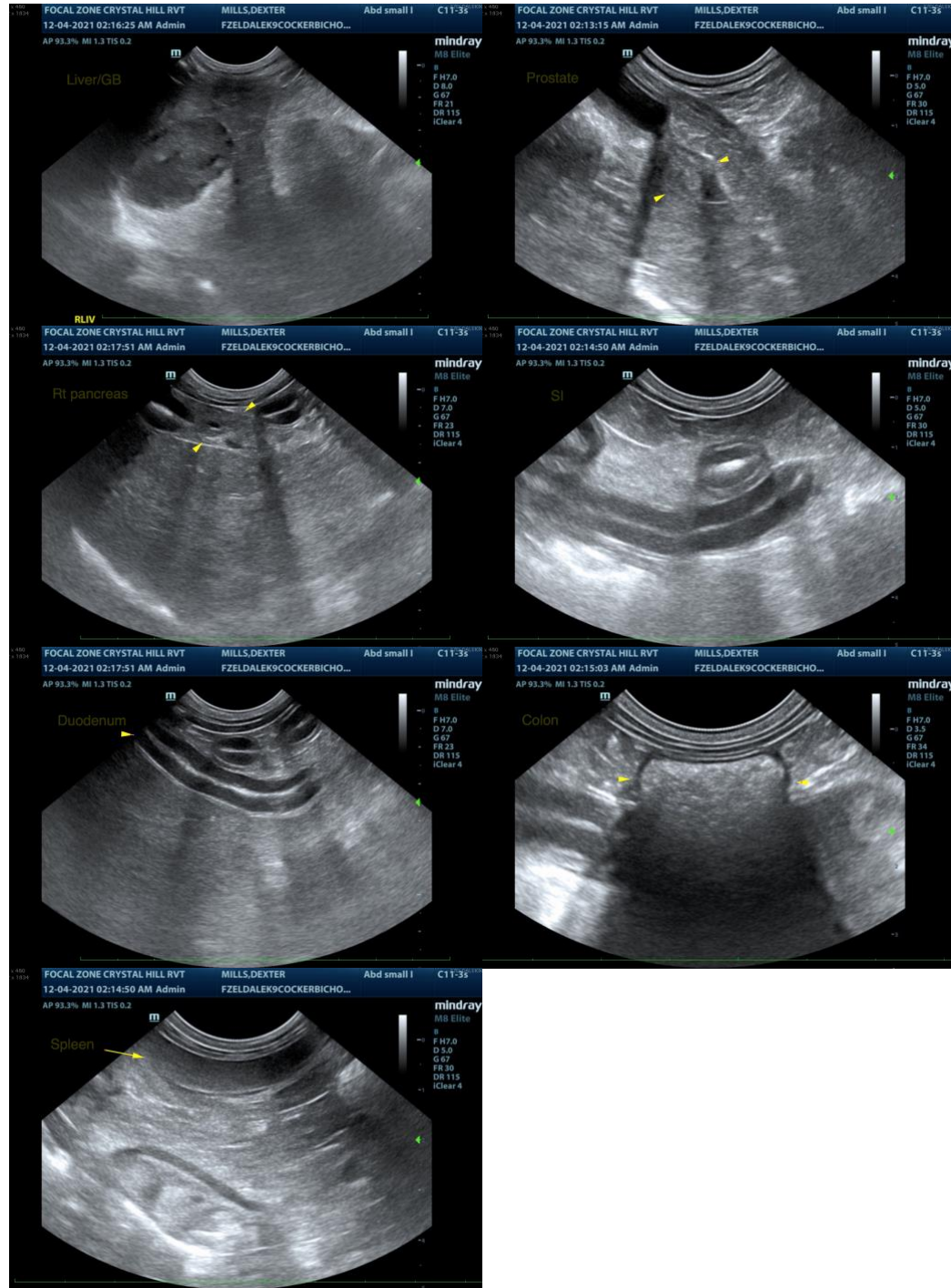
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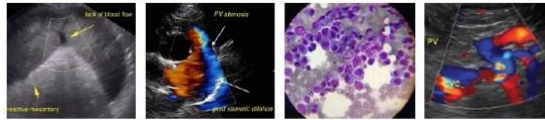
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The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

Thank you for this referral. If the clinical or image interpretation does not parallel your findings or if I can be of any further assistance, please contact me.



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